

# DAIRY

## VARIATIONS IN CREAM TEST

Common Cause of Dissatisfaction on Part of Seller—Use of Tester is Urged by Expert.

(By C. H. ECKLES, Missouri College of Agriculture.)

One of the most common causes of dissatisfaction on the part of the man who sells cream on the butterfat basis, arises from variations in the test. This is especially true if each can is tested separately and the best way for the seller to convince himself that the tester is neither careless nor dishonest is to secure a little outfit for himself. A well-made, accurate and satisfactory tester can now be bought for five dollars and its use will not only satisfy the seller that he is getting honest treatment but will enable him to detect the boarders in his herd. The general interest in this subject is compelling the Missouri agricultural experiment station to reprint a circular for general distribution, but a little discussion of the principal causes of variation in this brief form may avoid the necessity for so wide a distribution of that circular.

**Speed of Separator.**—A change in the speed of the separator immediately causes a change in the tests of the cream, the higher the speed the greater the amount of skim milk thrown out and so the higher the test of the cream secured. Putting it in another way, a low speed results in a larger quantity of thinner cream.

**Rate of Inflow.**—The use of the float does not always insure a uniform flow of milk into the separator, because the faucet may not always be opened equally wide and the flow will be more rapid when the tank is full than when it is nearly empty. Anything which makes the inflow more rapid will increase the proportion of skim milk which goes through, and lower the test of the cream secured.

**Flushing the Bowl.**—The amount of water used in flushing may easily be varied a pint or more and this without any other cause or variation may change the test by two, three, or even four or five per cent.

**Variations in the Milk Itself.**—The milk of an entire herd may rise or fall in its test from day to day because of excitement or change in the weather. If the milk of a herd, whose average test is four per cent, is ordinarily so separated that the cream tests 40 per cent fat, the test will suddenly rise to 42.5 per cent if the milk of the herd is suddenly raised to 4.25 per cent without any change in method of separating.

**Cream Screw.**—The test is, of course, readily controlled by means of the cream screw, but as it is seldom changed in this way, on the average farm, there should be no trouble because of variation from this source.

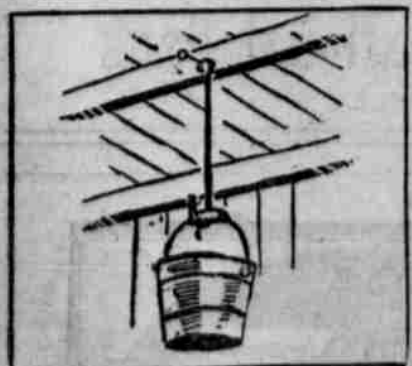
**Feed of the Cow.**—Variations in cream tests are practically never caused by changes in the feed of the cow as every well-informed cream seller is now aware.

**Mistakes and Dishonesty.**—Mistakes are most likely to result from carelessness in taking samples, as they must be very carefully and skillfully taken if they are to tell the truth and result in a fair payment, but actual dishonesty is probably much rarer than many sellers believe. A clever thief would manipulate the reported test in such a way as not to arouse the suspicion that an honest report sometimes brings up in the mind of the man who does not consider all the possible hidden causes of variation.

## KEEP THE NEW MILK CLEAN

Pails Are Attached to Overhead Sleepers in Barn, High Enough to Insure Cleanliness.

We keep the milk clean until it is ready to be taken to the house by hanging it from one of the overhead sleepers in the barn. Some old rake teeth not in use were shaped into



Pail Hung on Sleeper.

hooks by one of the farm hands in the home blacksmith shop on a rainy day, writes H. G. Williams in Nebraska Farm Journal. These hooks are fastened over spikes driven into the sleepers. The sleepers are white-washed, and the pails are up high enough to insure perfect cleanliness.

## SHORTAGE OF GOOD BUTTER

No Danger of Oversupply in the Big Markets in Spite of Large Production of Last Year.

There is one thing of which there is no danger of an oversupply, and that is butter. There is a shortage of good butter in the big markets at the present time, in spite of the large production of the last year.



## MATERIALS FOR FARM ROADS

Should Be Located With Reference to Efficiency of Farm Plant—Good Drainage Needed.

The private roads on the farm differ in general from the public roads only in the amount and kind of traffic which they carry. The fundamental principles involved in their construction and maintenance are the same. But, as the farm road is called on to bear far less traffic, the ordinary methods of construction and maintenance are so modified and the use of materials so adapted as to meet the special requirements and reduce the cost. To build the farm roads in the same manner as public thoroughfares, which carry much greater traffic, in general would be a useless waste of money.



Gravel Road on English Farm.

The first consideration is the location of the roads and paths about the farm. The roads and paths are a part of the permanent farm plant. Consequently they should be so located as to best serve the purpose for which they are intended, should fit in with the general scheme of the farm, and at the same time should avoid as much as possible places which would require difficult and expensive construction or maintenance. The main consideration, however, must be to secure the highest degree of efficiency from the farm plant as a whole.

The earth road is the most common type of farm road and will probably so remain. When properly crowned, drained and maintained with the split-log drag or other similar device, the earth road, on all but a few exceptional soils or in a few places immediately around the farm lots and buildings, can be made to answer the requirements fairly well. A little grading will in general give the earth road a crown sloping from the center toward the side ditches at a rate of about one inch to the foot, and side ditches of sufficient size to carry away the storm water can usually be constructed without difficulty. If the ground is springy the side ditches may be made deeper, or the ground water may be carried away by tile drains.

The fundamental requirement of an earth road is always good drainage. This involves, first, the removal of the water which reaches the surface of the road from precipitation or otherwise; and second, in certain places the removal of any ground water which reaches the road from underground seepage. Surface drainage is accomplished by securing a reasonably firm crowned roadway and providing ditches of sufficient size and with ample grade and frequent outlets. Sub-drainage to remove the water from beneath the road surface or to prevent its passage into the roadbed is usually accomplished most effectively by so-called blind drains or by means of properly located tile drains.

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## REPAIR BAD SPOTS IN ROADS

Mudholes Should Be First Drained and Soft Dirt Removed—Don't Be Afraid of Dragging.

Don't try to fill a mudhole without first draining out the water and removing the soft mud. Don't try to fill it with large stones, because if this is done there will soon be two mudholes instead of one. Don't try to fill a mudhole with sods or similar material which absorb water readily.

On an earth or gravel road ruts are best treated with the drag. Don't be afraid of dragging too often during a rainy spell. If a thin coat of sand or gravel be spread over the road surface when it has been softened by rain and then worked in by traffic and a liberal use of the drag, a poor earth road can be much improved and made to carry a surprisingly heavy traffic for a short time.

Keep to the crown of the road. If everybody does that, and keeps just out of the rut, there cannot be any ruts. Let the water have a chance to run off. It cannot if you rut the sides.

**Reasonable Proposition.** A good road between every farm and market is a reasonable and worthwhile proposition.

**Look for Bad Spots.** If you must haul over ten miles of good road and one-half mile of bad road, you must load for the bad.

# ORCHARD

## RAISING GRAPES FOR FAMILY

One of Our Finest Fruits, Being Both Palatable and Healthful—Vines Cost but Little.

The grape is one of our finest fruits. It is both palatable and healthful. If it is given any kind of a chance it will do at least fairly well almost anywhere. Except in specially favorable localities it is not to be recommended for growing on a large scale for market but for home use it deserves to be grown on every farm.

An ample quantity of grapes for an average family can be grown at very small expense. Only a very limited area of land will be required. The vines cost but little and come into bearing early. They are long lived and their care takes but little time. They should be obtained from a reliable nurseryman and should not be more than two years old. It is well to plant them in rows, but where this is not convenient the vines may be scattered in various places. They can be trained to stakes having three or four cross arms, to wires or slats fastened to a line of posts, or to arbors that are ornamental as well as useful.

Vines often do well when allowed to run on a fence or wall, and still better when trained on the south side of a building.

By planting vines of early, medium and late ripening varieties, including one or two of the best keeping sorts, fruit may be had during several months. There should be plenty of room on any farm for enough vines to furnish all the grapes the family would care to use, either as fresh fruit, or for making grape juice, marmalade, jelly, preserves, or other favorite preparations.

The work of setting grapevines must be deferred until spring, but this does not mean that nothing can be done about it until then. The selection of varieties should be attended to promptly and as many vines as will be needed should be ordered not later than midwinter.

## HOW TO PRUNE RASPBERRIES

Work May Be Done at Any Time After Leaves Have Fallen—Illustration Answers Query.

In response to a query as to the best method of pruning raspberry and blackberry bushes a writer in Green's Fruit Grower gives the following reply:

The plant at the right in the illustration shows the bush properly pruned, and the two at the left show the same bushes unpruned, better than words can tell. This pruning of raspberry and blackberry bushes may be done at any time after the leaves have fallen. If I could have my choice as to the date I would do the pruning at the close of the winter. But those



Pruned and Unpruned Raspberry Canes.

who have large plantations are obliged to do the pruning when they have leisure time, therefore to such people I recommend pruning any time during winter.

Where the winters are severe, the thermometer going 20 degrees below zero or lower, the plants are bent down and each bush held down closely to the ground for protection. I would not recommend pruning these bushes thus protected until the winter is past, and the buds are beginning to start growth.

## CULTIVATION OF GRAPEVINES

Some Hoed Crop May Be Grown Between Plants for First Two Years—Good Roots Essential.

After grapevines have been planted they should be well cultivated and some hoed crop that will not shade the young plants may be grown between the plants for the first two years. After this the vines need all the land.

The best vines for planting are strong one-year or two-year-old plants that have been grown from layers or cuttings, and only those having good root system should be used.

**Making Bordeaux Mixture.** Bordeaux mixture is made by combining a solution of copper sulphate (blue vitriol) with a solution of lime. The copper is the active agent. The addition of lime neutralizes the injurious effect of the copper sulphate by combining with it to form copper hydroxide, which is insoluble in water. In this form it adheres better to the foliage.

# WORKMEN'S COMPENSATION LAW

The Kentucky Workmen's Compensation Law, recently passed by the Legislature of Kentucky, is of the most vital importance to the manufacturers and employers of labor in this State, as well as to the employees, owing to the fact that it works a radical change in the law previously existing with reference to the compensation for personal injuries. Following are some of its salient features:

This law takes effect on the first day of August, 1916, but provides that the employers and employees may come within its provisions, and contracts of insurance may be entered into at any time after April 1, 1916; the same to take effect on August 1, 1916. The Act covers employers having five or more employees regularly engaged in the same occupation or business, except (1) domestic servants, (2) agricultural laborers, (3) employees of steam railways, all such common carriers, other than steam railways, in cases where the laws of the United States provide for compensation.

## COMMON LAW DEFENSES.

Under the law as it existed prior to the passage of this Act, every employer who was sued by one of his employees for damages for personal injuries was permitted to defend such suit upon one of the following grounds: (1) That the employee was guilty of contributory negligence; (2) That the injury was caused by the negligence of a fellow-servant of the employee; (3) That the employee had assumed the risk. These defenses are what are commonly known as common law defenses.

## EMPLOYER WAIVES COMMON LAW DEFENSES BY REJECTING ACT.

The Kentucky Workmen's Compensation Law provides that every employer, affected by the provisions of this Act who does not elect to operate thereunder is deprived of these so-called common law defenses. In other words, if an employer is sued by an injured employee to recover damages, and the employer has not accepted the provisions of this Act, he is prohibited from making any one of these three defenses to any suit brought by any injured employee; the effect of which is practically to make the employer who fails to within the provisions of the Act an insurer of the safety of his employees.

## EMPLOYEE ASSUMES COMMON LAW BURDENS BY REJECTING ACT.

The law also provides that if the employer agrees to come within the provisions of the Act and the employee refuses to accept its provisions, that in such event, in any suit brought by any injured employee to recover damages, the employer is permitted to plead as a defense to any such suit any one or all of these common law defenses above referred to. It will thus be seen that while the Kentucky Workmen's Compensation Act is called an elective act, its practical effect is to make it a compulsory one.

## METHOD BY WHICH EMPLOYER AND EMPLOYEE MAY COME WITHIN PROVISIONS OF ACT.

The Act is very explicit in its terms as to how the employer and employee may accept its provisions. It provides that an election to operate under the provisions of the law may be effected by the employer by filing with what is known as the Workmen's Compensation Board, whose office will be at Frankfort, Kentucky, the following notice:

"(Name of employer) elects to operate under the provisions of Chapter . . . . ., Acts of 1916, commonly known as the Workmen's Compensation Act, this election being effective as of the day of . . . . . and covering (here insert name of industry, business or operation on which election is made.)"

In addition to the name of each industry, business or operation as to which such election is filed, there shall also be stated in the notice with reference thereto (1) its location and address of chief office, (2) average number of employees during preceding twelve months, (3) kind of business being conducted, (4) method of securing payments of compensation to employees which the employer elects to adopt.

Such notice shall be in writing and signed by the employer, if an individual, by any partner if a partnership, or by the chief officer or agent within this State if a corporation. The employee may elect to come within the provisions of the law by signing the following notice, to-wit: "I hereby agree with (name of employer) to accept the provisions of Chapter . . . . ., Acts of 1916, commonly known as the Kentucky Workmen's Compensation Act."

## INJURIES COVERED.

The law covers all personal injuries sustained by an employee by accident arising out of and in the course of his employment, or for death resulting from such incidental injury, except that personal injury by accident shall not include diseases, except where the disease is the natural and direct result of a traumatic injury (an injury due to violence) by accident, nor shall it include the result of a pre-existing disease.

## WHEN COMPENSATION IS NOT ALLOWED.

No compensation is allowed for an injury or death caused by a wilful self-inflicted injury, wilful misconduct or intoxication of an employee.

## COMPENSATION DUE EMPLOYEE FOR INJURIES RESULTING IN TOTAL DISABILITY.

Where the injury causes total disability for work, the employer, during such disability, except the first two weeks thereof, shall pay the employee so injured a weekly compensation equal to sixty-five per cent of the average weekly earnings, not to exceed \$12.00 nor less than \$5.00 per week, and such payments to be made during the period of total disability, but not longer than eight years after the date of the injury, nor in no case to exceed the sum of \$5,000.00.

In case of the following injuries, the disability shall be deemed total and permanent:

- (1) The loss of sight in both eyes.
- (2) The loss of both feet at or above the ankle.
- (3) The loss of both hands at or above the wrist.
- (4) A similar loss of one hand and one foot.
- (5) An injury to the spine resulting in permanent and complete paralysis of both arms or both legs or of one arm and one leg.
- (6) An injury to the skull resulting in incurable insanity or imbecility.

## COMPENSATION ALLOWED FOR DEATH.

If death results within two years from an accident, for which compensation is payable under the law, the employer, or his insurer, shall pay to the persons entitled to compensation, or if none, then to the administrator of the deceased employee, reasonable burial expenses, not to exceed the sum of \$75.00, and shall also pay to or for the following persons the following compensation:

- (1) If the deceased left no dependents, there shall be paid, in addition to burial expenses and medical expenses, if any, the further sum of \$100.00, payment to be made to the personal representative of the deceased employee.
- (2) If there are one or more wholly dependent persons, sixty-five per cent of the average weekly earnings of the deceased employee, but not to exceed \$12.00 nor less than \$5.00 per week, shall be payable, all such payments to be made for the period between the date of death and 335 weeks after the date of accident to the employee, or until the intervening termination of dependency, but in no case to exceed the maximum sum of \$4,000.00.
- (3) If there are partly dependent persons, the payments shall be such part of what would be payable for total dependency as the partial dependency existing at the time of the accident to the employee may be proportionate to total dependency, all such payments to be made for the period

between the date of death and 335 weeks after the date of the accident to the deceased employee, or until the intervening termination of dependency, but in no case to exceed, in the aggregate on account of such death the maximum sum of \$4,000.00.

## HOW DIFFERENCES AND DISPUTES ARE SETTLED.

The Workmen's Compensation Board shall settle all differences and disputes that may arise between an injured employee and his employer pertaining to the amount of compensation to which said employee, or in the event of his death, his dependents, may be entitled to, subject to a right of appeal by either party to the Circuit Court, if the amount is sufficient under the existing laws to authorize an appeal, to the Court of Appeals of Kentucky.

## ATTORNEY'S FEES.

The fees of attorneys shall be subject to the approval of the Board, but no fee shall be allowed to any such attorney exceeding an amount equal to fifteen per cent of the amount of the first \$1,000.00 or fraction thereof recovered, or ten per cent of the excess of such recovery, if any, over \$1,000.00; and the Workmen's Compensation Board may deny or reduce an attorney's fee upon proof of solicitation of employment of such attorney.

## EFFECT OF LAW AS BETWEEN EMPLOYER AND EMPLOYEE

WHERE INJURY TO EMPLOYEE IS DUE TO NEGLIGENCE OF THIRD PARTY.

The law provides that if an employee is injured under circumstances creating some other person than the employer a legal liability to pay damages in respect thereto, the employee may elect to bring suit against such person other than his employer, or may elect to receive the compensation provided for in the Act, or he may elect to proceed both against the employer for compensation and against such third person to recover damages, but he shall not collect from both; but if he accepts the benefits by the Act, the employer shall have a right to recover in his own name or that of the injured employee from such third person the amounts paid by such employer to such employee.

## LIABILITY OF CONTRACTORS, INTERMEDIATE AND SUB-CONTRACTORS.

The Act provides that a principal, contractor, intermediate, or sub-contractor shall be liable for compensation provided for by the Act to any employee injured while in the employ of any one of his intermediate or sub-contractors to the same extent as the immediate employer; but that any principal, intermediate or sub-contractor who shall pay compensation may recover the amount paid from any subordinate contractor through whom he may have been rendered liable.

Every claim to compensation under this section of the Act, however, shall in the first instance be presented to and instituted against the immediate employer, but such proceeding shall not constitute a waiver of the employee's rights to recover compensation from the principal or intermediate contractor, provided that the collection of full compensation from one employer shall bar recovery by the employee against any others, nor shall the employee recover from all a total compensation in excess of the amount for which his immediate employer is liable.

This section of the law applies only in cases where the injury occurred on, in or about the premises upon which the principal contractor has undertaken to execute work or which are under his control otherwise or management.

## THE PAYMENT OF COMPENSATION MUST BE SECURED BY THE EMPLOYER.

Every employer must either insure and keep insured his liability for compensation, or must furnish to the Board satisfactory proof of his financial ability to pay direct the compensation in the amount and manner and when due as provided for by the Act; and in the latter case, the Board shall require the deposit of an acceptable security, indemnity or bond to secure to such an extent as the Workmen's Compensation Board may direct, the payment of workmen's compensation liabilities as they are incurred.

## FORMS TO BE FURNISHED BY THE WORKMEN'S COMPENSATION BOARD.

The law requires that the Workmen's Compensation Board shall prepare, cause to be printed, and upon request furnish free of charge to any employer or employee such blank forms as may be deemed requisite to facilitate or promote the efficient administration to the Act.

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